SHISHKIN, I.

Two booklets on Afanasii Nikitin ("Afanasii Nikitin" by M.Vitashevskaia and "Notes of Afanasii Nikitin on 15th-century India" by N.V.Vodovozov. Reviewed by I.Shishkin) Izv.Vses. geog.ob-va 89 no.3:281-283 My-Je '57. (MIRA 10:11)
(Nikitin, Afanasii, 15th century) (India--Description and travel)
(Vitashevskaia, M.) (Vodovozov, N.V.)

SHISHKIN, I. [Shyshkin, I.]

Energy of the depths of the earth. Nab. i sial. 34 no. 6:21 Je '58.
(MIRA 11:7)

(Volcanoes)
(Geysers)

SHISHKIN, I. [Shyshkin, I.], lektor

Northern lights. Hab. i sial. 35 no.6:19 Je '59. (MIRA 12:8)

1. Moskovskiy planetariy, deystoitel'nyy chlen Geograficheskogo obshchestva SSSR.
(Auroras)

VESTITSKIY, M. [Vestytski, M.], lektor; SHISHKIN, I. Shyshkin, I.], lektor

Can we make rain? Rab. i sial. 35 no.7:20 Jl '59.
(MIRA 12:12)

1.Moskovskiy planetariy. Deystvitel'nyye chleny Geograficheskogo obshchestva SSSR.
(Rain making)

SHISHKIN, I.

In the valley of the Tedzhen River. Znan.-sila 37 no.7:48-51 Jl '62. (MIRA 15:9)
(Tedzhen Valley--Antiquities)

SHISHKIN, I.A., kand.tekhn.nauk; OSIPOV, G.L., kand.tekhn.nauk; KARAGODINA, I.L., mladshiy nauchnyy sotrudnik

Relation of the noise conditions in block no. 9 of Novyye Cheremushki to external noises. Issl.po mikroklim.nasel.mest i zdan.i po stroi.fiz. no.1:54-70 '62. (MIRA 15:9)

1. Nauchno-issledovatel'skiy institut gradostroitel'stva i rayonnoy planirovki Akademii stroitel'stva i arkhitektury SSSR (for Shishkin). 2. Nauchno-issledovatel'skiy institut stroitel'noy fiziki i ograzhdayushchikh konstruktsiy Akademii stroitel'stva i arkhitektury SSSR (for Osipov). 3. Nauchno-issledovatel'skiy institut gigiyeny imeni F.F. Erismana (for Karagodina).

SHISHKIN, I.A., kand.tekhn.nauk

Studies of noise conditions in urban developments. Issl.po mikroklim.nasel.mest i zdan. i po stroi.fiz. no.2:74-96 '62. (MIRA 16:6)

(Noise)

SHISHKIN, I.A., kand.tekhn.nauk; OSIPOV, G.L., kand.tekhn.nauk;
PRUTKOV, B.G., inzh.

Protecting residential areas from city noise. Izv.ASiA no.3:57-68 '62. (MIRA 15:11)
(Noise control)

MARGOLIS, A.M., promyshlenno-sanitarnyy vrach, YUVZHENKO, F.I.; GUSLITS, I.G., zasluzhennyy vrach RSFSR; ISAVNIN, L.S., inzh.; KOVRIGIN, S.D., SHISHKIN, I.A., kand.tekhn.nauk; KOLKER, R.M., inzh. (Leningrad)

Noise is our enemy. Zdorov'e 8 no.10:22-24 O '62. (MIRA 15:10)

1. Glavnyy sanitarnyy vrach Kiyeva (for Yuvzhenko). 2. Nachal'nik Moskovskoy shumometricheskoy stantsii (for Isavnin).
(NOISE CONTROL)

[redacted]GODINA, I.I.; [redacted]OV, G.L.; SHISHKIN, I.A.; SAURATOVA, L.Ya., red.

[City and residential noises and their control] Gorodskie i zhilishchno-kommunal'nye shumy i bor'ba s nimi. Moskva, Meditsina, 1964. 230 p. (MIRA 17:7)

BOGOYAVLENSKIY, G.P.; SHISHKIN, I.B.; Prinimal uchastiye GALITSKIY, V.A.; MAL'CHEVSKIY, G.N., red.-sostavitel' kart; BELEN'KIY, A.B., kand. ist. nauk, nauchn. red.; GRIN, M.F., kand. ekon. nauk, nauchn. red.; ZABELIN, I.M., kand.geogr. nauk, nauchn. red.; SAMSONENKO, L.V., nauchn. red.; FRADKIN, N.G., kand. geogr. nauk, nauchn. red.; BELICHENKO, R.K., mlad. red.; KIR'YANOVA, Z.V., mlad. red.; VILENSKAYA, E.N., tekhn. red.

[Land and people; geographical calendar for 1964] Zemlia i liudi; geograficheskii kalendar' 1964. Moskva, Gos.izd-vo geogr. lit-ry, 1963. 302 p. (MIRA 17:2)

SHISHKIN, I.Z.

Liver resections for echinococcus alveolaris. Khirurgiia 33 no.2: 115-116 F '57. (MLRA 10:6)

1. Iz khirurgicheskogo otdeleniya (zav. I.Z.Shishkin) bol'nitsy Noril'skogo gornometallurgicheskogo kombinata.

(LIVER DISEASES, surg.
echinococcosis, resection (Rus))
(ECHINOCOCCOSIS, surg.
liver, resection (Rus))

SHISHKIN, I.Z.

Isolated subcutaneous rupture of the pancreas. Khirurgiia 33 no.11: 112-113 N '57. (MIRA 11:2)

1. Iz khirurgicheskogo otdeleniya bol'nitsy Noril'skogo gorno-metallurgicheskogo kombinata.
(PANCREAS, wds. & inj.
traum. subcutaneous tear, surg. (Rus))

SHISHKIN, K.

Improve personnel work in the insurance organizations of the R.S.F.S.R. Fin.SSSR 16 no.6:60-62 Je '55. (MLRA 8:6)
(Insurance--Managenent) (Personnel management)

SHISHKIN, K.

Observe labor laws. Visnyk AN URSR 28 no.3:60-61 Mr '57.
(MLRA 10:5)
(Labor laws and legislation)

SHISHKIN, KIRILL ALEKSANDROVICH

Sovetskiye Teplovozy (by) K.A. Shishkin (1 Dr.) Izd. 4., Perer. I Dop. Moskva, Mashgiz, 1961.
480 p. illus., diagrs., graphs, tables.
Bibliography: p. 478.

SHISHKIN, Kirill Aleksandrovich, prof.; GUREVICH, Abram Natanovich, kand. tekhn. nauk; STEPANOV, Aleksandr Dmitriyevich, doktor tekhn. nauk; VASIL'YEV, Vladimir Andreyevich, kand. tekhn. nauk; SURZHIN, Sergey Nikolayevich, inzh.; KISELEVA, N.P., red.

["TE3" diesel locomotive] Teplovoz TE3. Izd.3., perer. [By] K.A.Shishkin i dr. Moskva, Transport, 1965. 411 p. (MIRA 18:7)

SHISHKIN, K. A

USSR/Processes and Equipment for Chemical Inductries K-1
Processes and Apparatus for Chemical Technology

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 14161

Author : Plit I.G., Shishkin K.N.
Title : Absorption of Carbon Dioxide by a Solution of Potash in a Bubble of Foam.

Orig Pub : Zh. prikl. khimii, 1956, 29, No 9, 1323-1329

Abstract : Study of the process /of absorption 7 of CO_2 by a solution of potassium carbonate (I) depending upon the basic factors. Experiments were conducted in a unit where absorption was effected in an individual bubble of foam and consequently the surface of phase contact could be determined by calculations. A study was made of the effect of addition of surface active substance, saponin, (II), on absorption kinetics, and it was found that with low concentrations of II $x < 0.6$ g/liter, there is observed a decrease in rate of absorption, and absorption

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SHISHKIN, K.N.; PAKHMURA, N.G. [Pakhmura, N.H.]

Salt classification and dust removal by means of air blowing systems. Khar.prom. no.4:63-66 O-D '62. (MIRA 16:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Salt industry—Equipment and supplies)

SHISHKIN, K.N.; PAKHMURA, N.G.

Investigating the classification of ground grog in an air flow. (MIRA 16:10)
Ogneupory 28 no.9:418-422 '63.

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

SHISHKIN, K.N.; KOTSYUBA, A.A.; YEL'TSOVA, T.P.

Vapor - liquid equilibrium in four-component mixtures. Ukr. khim.zhur. 30 no.2:137-143 '64. (MIRA 17:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

SERGEYEV, A.A., inzh.; SHISHKIN, K.P., inzh.

Breakdown of a BK-405 tower crane. Elek.sta. 29 no.1:69-70 Ja '58. (MIRA 11:2)
(Cranes, derricks, etc.)

Shishkin, L. A.

"The kinetic theory of heat conductivity and the absorption of sound in ferromagnetic dielectrics at low temperature." Min Higher Education Ukrainian SSR. Khar'kov Order of Labor Red Banner State U imeni A. M. Gor'kiy Chair of theoretical Physics. Khar'kov, 1956. (Dissertation for the Degree of Candidate in Physicomathematical Sciences.)

Knizhnaya letopis'
No. 21, 1956. Moscow.

SOV/56-34-5-31/61

AUTHORS: Akhiyezer, A. I., Shishkin, L. A.

TITLE: On the Theory of Thermal Conductivity and Absorption of Sound in Ferromagnetic Dielectrics (K teorii teploprovodnosti i pogloshcheniya zvuka v ferromagnitnykh dielektrikakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 5, pp. 1267 - 1271 (USSR)

ABSTRACT: In this paper the determination of the temperature dependence of the heat conductivity and of the absorption coefficient of sound in ferromagnetic dielectrics is investigated. In ferromagnetic dielectrics the elementary excitations are not only represented by phonons but also by spin waves. Therefore the investigation of the influence of the spin waves on heat conductivity and absorption of sound in these materials is of interest. The authors show that at low temperatures the heat conductivity of an unlimited ferromagnetic dielectric without admixtures is determined essentially by the interaction of the spin waves with each other and with the phonons. The dissipation function of the ferromagnetic dielectric will, if an external sonic field

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at low temperatures is present, also be determined by the interaction of the spin waves among each other; it will be independent of the temperature. (In the case of common dielectrics it is inversely proportional to the temperature). The following elementary interaction processes in the system of the spin waves and phonons which are considered are the most important ones: Transformation of two phonons into one phonon, transformation of two spin waves into one spin wave, the scattering of a spin wave by a phonon, and the transformation of two spin waves into one phonon. Expressions for the probability of these processes are written down. Subsequently the authors write down and explain the kinetic equations for the distribution functions of the spin waves and phonons with regard to these interaction processes. These equations are specialized for low temperatures. Expressions for the heat currents, caused by the phonons and spin waves, are given. In the last section the absorption of sound in a ferromagnetic dielectric is investigated. On this occasion the deviations of the distribution functions of the phonons and spin waves from their equilibrium values must be found and the increase

of the entropy of the crystal, which is connected with these deviations, must be determined. The influence of the sound field on the phonons and spin waves is reduced to a change in the energy of the phonon and of the spin wave. At $T \ll \Theta^2/\Theta_c$ the absorption of the sound is caused mainly by the spin waves. The authors express their gratitude to M.I.Kaganov for valuable discussions. There are 4 references, 3 of which are Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: December 12, 1957

On the Theory of Thermal Conductivity and Absorption of Sound in Ferromagnetic Dielectrics SOV/56-34-5-31 /61

1. Dielectrics--Absortive properties 2. Sound--Absorption 3. Dielectrics--Thermodynamic properties 4. Ferromagnetic materials--Applications

Card 4/4

AUTHOR: Shishkin, L. A. SOV/56-35-1-44/59

TITLE: The Absorption of Sound in Ferromagnetic Dielectrica in a Magnetic Field at Low Temperatures (Pogloshcheniye zvuka v ferromagnitnykh dielektrikakh v magnitnom pole pri nizkikh temperaturakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 35, Nr 1, pp. 286 - 287 (USSR)

ABSTRACT: According to a paper by Akhiyezer and the above mentioned author (Ref 1) the absorption of sound in ferromagnetic dielectrica (which is caused by the internal friction in the system of the elementary excitations, phonons, and spin waves) at low temperatures is principally determined by the spin waves, and it does not depend on temperature. The external magnetic field changes the relaxation time in such a system and also the temperature dependence of the absorption coefficient of sound. First, formulae are given for the relaxation times of spin waves and phonons. According to Akhiyezer (Ref 2) the following elementary processes are the most important: the conversion

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of 2 spin waves into 1 spin wave, the conversion of 2 phonons into 1 phonon, and the scattering of spin waves by phonons. If there is an external magnetic field, the energy of the spin wave depends on the field strength and this dependence has the form $\varepsilon_0 + 2\beta H$; ε_0 denotes the energy of the spin wave without a magnetic field, H - the magnetic field strength, β - the Bohr magneton. This dependence implies a dependence of the relaxation times of the phonons and spin waves on the magnetic field. The relaxation times for the spin-spin interactions satisfy different relations for the cases of high and low values of $2\beta H/\kappa T$. κ denotes the Boltzmann (Bol'tsman) constant and it holds that $2\beta/\kappa \sim 10^{-4}$. The formula for the above-mentioned relations are given explicitly. The relaxation times of the spin waves and phonons with respect to the interaction with one another and of one phonon with another phonon are not modified by the existence of an external magnetic field. The formula for these relaxation times are given explicitly. For $H/T \ll 10^4$ and $T \ll \theta^2/\Theta_0$ the dissi-

pative function and the absorption coefficient of sound depend on the relaxation time. In this case the magnetic field intensifies the absorption of sound. For $H/T \gg 10^4$ and $T \ll \Theta^2/\Theta_c$ the spin-spin interaction has a low degree of probability and the greatest contribution to the dissipative function is made by the interaction of the spin waves with the phonons. For sufficiently strong magnetic fields the absorption of sound depends exponentially on temperature, but it does not depend on the field strength. In both of the above mentioned cases the phonons play a less important rôle in the absorption of sound. The author thanks Professor A.I.Akhiyezer, who suggested this topic to the author. There are 2 references which are Soviet.

The Absorption of Sound in Ferromagnetic Dielectrica in a Magnetic Field at Low Temperatures SOV/56-35-1-44/59

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: March 29, 1958

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75339
SOV/57-29-10-16/18

9.1300

AUTHORS: Shestopalov, V. P., Shishkin, L. A.

TITLE: Slow Electromagnetic Waves in Spiral-Shape Waveguides With Gyrotropic Medium (News in Brief)

PERIODICAL: Zhurnal teknicheskoy fiziki, 1959, Vol 29, Nr 10, pp 1285-1288 (USSR)

ABSTRACT: The paper represents a brief review of literature on the subject of slow electromagnetic waves in spiral-shape waveguides with gyrotropic medium, and is presented under a heading "News in Brief." In particular a waveguide in a ferrite medium is considered. It is stated that equations representing the dispersion (scattering) of the system cannot be used without introducing numerous simplifications. A brief discussion is also given of a spiral-shape waveguide within which there is a plasma, and whose outside surface is adjoined to a dielectric extending radially to infinity. There are 2 figures; and 18 references, 15 Soviet, 1 Swedish, 2 U.S. The U.S. references are: Tien, P. K., [illegible], 41, 11, 1617, 1953; Watkins, D. A.,

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Slow Electromagnetic Waves in Spiral-Shape Waveguides With Gyrotropic Medium (News in Brief)

75339
SOV/57-29-10-16/18

and Ash, E. A., J. Appl. Phys., 25, 6, 745, 1954.

ASSOCIATION: Khar'kov State University im. A.M.Gor'kiy (Khar'kovskiy gosudarstvennyy universitet imeni A. M. Gor'kogo)

SUBMITTED: June 2, 1959

Card 2/2

VALITOV, Rafkat Amirkhanovich, prof.; TARASOV, Vladislav Lukich; SHISHKIN, Leonid Adrianovich; TSARENKO, Viktor Timofeyevich; FILONENKO, Sergey Nikonovich; DOMANOVA, Yelena Alekseyevna; BARKANOV, Nikolay Arsent'yevich; SYTYY, Gennadiy Fedorovich; KURILOVA, T.M., red.; TROFIMENKO, A.S., tekhn. red.

[Measurement of transistor parameters] Izmereniia parametrov poluprovodnikovykh triodov. Khar'kov, Izd-vo Khar'kovskogo Gos. univ. im. A.M.Gor'kogo, 1960. 193 p. (MIRA 14:8)
(Transistors)

88159

S/109/60/005/011/008/014
E140/E483

9/1300

AUTHORS: Bulgakov, B.M., Shestopalov, V.P., Shishkin [redacted] and Yakimenko, I.P.

TITLE: Symmetrical Surface Waves in a Helical Waveguide Immersed in a Ferrite Medium

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.11, pp.1818-1827

TEXT: Suhl and Walker (Ref.3) have considered the dispersion properties of a helical waveguide with external ferrite medium in the presence of a constant transverse magnetic bias. The dispersion equations of such a system contain modified Bessel functions as well as Laguerre or Whittaker functions which complicates the analysis of the characteristic equations. If the magnetic bias field is parallel to the axis of the system, the longitudinal field components in the ferrite and free space are expressed by the modified Bessel functions. The dispersion equation can be analysed more fully therefore than in the case of transverse bias. The article derives the dispersion equation of a helical waveguide placed in a cylindrical cavity in an infinite ferrite medium. In cylindrical coordinates, the waveguide passes

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58159
S/109/60/005/011/008/014
E140/E483

Symmetrical Surface Waves in a Helical Waveguide Immersed in a Ferrite Medium

in a radial direction. It is assumed that slow axially-symmetrical waves propagate in the system. The following special cases are considered: small gyrotropicity, large magnetic bias field, the system close to resonance and low magnetic permeability. The dispersion equations here derived are solved by a method of successive approximations. The dispersion curves for various values of the system parameters are given. The article concludes with the calculation of the power flux distribution in the system. There are 6 figures and 12 references: 9 Soviet (one of which is a translation from English) and 3 non-Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet
im. A.M.Gor'kogo
(Khar'kov State University imeni A.M.Gor'kiy)

SUBMITTED: December 10, 1959

Card 2/2

BULGAKOV, B.M., SHESTOPALOV, V.P., SHISHKIN, L.A., YAKIMENKO, I.P.

Slow waves in a spiral wave guide with plasma. Zhur. tekh. fiz. 30 no.7:840-850 Jl '60. (MIRA 13:8)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo.
(Wave guides) (Plasma (Ionized gases))

9,1300 (inc/3301; also 1130)

21432
S/109/61/006/001/010/023
E140/E163

AUTHORS: Bulgakov, B.M., Shestopalov, V.P., Shishkin, L.A., and Yakimenko, I.P.

TITLE: Unilateral wave propagation in helical waveguide immersed in ferrite medium

PERIODICAL: Radiotekhnika i elektronika, Vol.6, No.1, 1961, pp. 81-91

TEXT: The authors consider the previously observed but not satisfactorily explained phenomenon of directive propagation in a system consisting of a helix surrounded by a ferrite medium with an applied constant axial magnetic field. The actual directivity observed of 6:1 (Ref.2: J.A. Rich, S.E. Weber, Proc. I.R.E., 1955, 43, 1, 100) is higher than that predicted by elementary theory, which determines the degree of directivity from the eccentricity of the magnetic field vector ellipse in the plane perpendicular to the constant magnetic field. Rich and Weber (Ref.2) proposed that the divergence between the experimental results and the predictions of the elementary theory are caused by the influence of the ferrite permeability on the magnetic

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vector ellipse eccentricity. The present authors have previously (Ref.3) published an electrodynamic solution of the problem for lossless systems. The present note solves the same problem for systems with dielectric and magnetic losses having a ferro-resonant character. The analysis predicts directivities of up to 8:1, a result useful for the design of ferrite attenuators for TWT-amplifiers. On the basis of the formulae obtained curves have been calculated which permit the following conclusions. (1) The directivity has a maximum in the neighbourhood of a resonant frequency, of the order of 8:1. (2) The dependence of attenuation of magnetization for a given magnetic field is weak. (3) At frequencies equidistant from resonance the attenuation increases as the magnetic field decreases. (4) In the presence of high dielectric losses frequency bands are possible in which the backward attenuation is lower than the forward attenuation. Thus the dependence of attenuation ratio and of absolute attenuation on the dielectric loss have the same character. It is necessary to take ferrites with the lowest possible dielectric loss.

21432

S/109/61/006/001/010/023
Unilateral wave propagation in ... E140/E163

There are 5 figures and 5 references: 3 Soviet and 2 English.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo
(Khar'kov State University imeni A.M. Gor'kiy)

SUBMITTED: February 15, 1960

Card 3/3

41425

S/142/62/005/004/003/010
E192/E382

9.2572

AUTHORS: Savchenko, M.A. and Shishkin, L.A.

TITLE: Influence of magnetization fluctuations on the thermal noise of a ferrite parametric amplifier of the electromagnetic type

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 5, no. 4, 1962, 454 - 458

TEXT: The paper was read at the Third All-Union Conference MV and SSSO SSSR on Radio-electronics, in Khar'kov, 1960. The noise in an electromagnetic parametric ferrite amplifier is determined by the magnitude of the fluctuation energy of the field at the signal frequency, the fluctuations being due to magnetization fluctuations at the resonance frequency coinciding with the pump frequency. A simplified model of the amplifier is considered. A small ferrite sphere is situated in a constant magnetic field $\overrightarrow{H}_o$ and in the alternating fields of the signal $H(\omega_1)$, of an auxiliary signal $H(\omega_2)$ and the pump generator $H(\omega_3)$. The resulting magnetic field and the

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Influence of magnetization ....

corresponding magnetic moment are thus given by:

$$\vec{H} = \vec{H}_0 + \sum_{\lambda} (\vec{H}_\lambda e^{i\omega_\lambda t} + \vec{H}_\lambda^* e^{-i\omega_\lambda t}), \quad (1)$$

$$\vec{M} = \vec{M}_0 + \sum_{\lambda} (\vec{M}_\lambda e^{i\omega_\lambda t} + \vec{M}_\lambda^* e^{-i\omega_\lambda t}), \quad (2)$$

where $\lambda = 1, 2, 3$. The equation of motion of the system is:

$$d\vec{M} / dt = \gamma[\vec{M}\vec{H}] \quad (6) .$$

This, combined with Eqs. (1) and (2), leads to a system of equations from which it is possible to determine the energy of the thermal fluctuation radiation of the field in the "near" and "far" wave zone. The expressions for the radiation fluctuations are derived and it is found that the energy of the thermal radiation is dependent not only on the temperature but also on the magnetizing field H_o and the amplitude of the signals H_1 and H_2 . The expressions are used to.

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Influence of magnetization ....

determine the noise-radiation of a ferrite amplifier based on a small spherical ferrite element situated in a resonator. For this case, the average energy of the fluctuation field is given by:

$$W_{iT} \cong \frac{4V_\Phi \gamma^2 \omega_1' \hbar |\vec{H}_1|^4 \chi_{II}''(\omega_n) \operatorname{cth} \frac{\hbar\omega_n}{2T}}{\left[(\Omega_1^2 - \omega_1^2)^2 + \frac{\Omega_1^2\omega_1^2}{Q_1^2}\right] \left(\int_{V_0} |\vec{H}_1|^2 dV\right)^2} \cdot \left\{\frac{1}{\omega_1^2}(|H_{2x}|^2 + |H_{2y}|^2) + 2\frac{\omega_n^2 + \omega_1^2}{(\omega_n^2 - \omega_1^2)^2}|H_{2z}|^2\right\}. \quad (22)$$

where Q_n is the quality factor of the resonator, V_0 is the volume of the resonator, V_Φ is the volume of the ferrite sample, Ω_n is the natural frequency of the resonator and χ'' is the imaginary component of the tensor of the magnetic susceptibility. It is found from Eq. (22) that for a typical electromagnetic ferrite amplifier $W_{iT} = 10^{-27}$ erg sec/cm^3.

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Therefore, in view of the fact that the thermal noise due to dielectric and metallic portions of the system is of the order of 10^{-14} erg, the magnetization-fluctuation noise can be neglected.

ASSOCIATION: Kafedra teoreticheskikh osnov radiotekhniki Khar'kovskogo aviatsionnogo instituta (Department of Theoretical Principles of Radio-engineering of Khar'kov Aviation Institute)

SUBMITTED: July 10, 1961 (initially)
January 27, 1962 (after revision)

42669

S/142/62/005/005/003/009
E140/E135

AUTHORS: Savchenko, M.A., and Shishkin, L.A.

TITLE: Surface spin waves

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v.5, no.5, 1962, 557-560

TEXT: The paper considers electromagnetic-spin waves in ferromagnetics which pass into surface electromagnetic waves at low frequencies and surface spin waves at high frequencies. Spin waves due to exchange and magnetic-dipole interactions and electromagnetic waves arising from eddy-fields are limiting cases of the same phenomenon. The author considers these for the case of a ferrite with a cubic crystal lattice magnetised parallel to the surface (ferrite filling an infinite half-space). Real, imaginary and complex solutions for the propagation constant correspond to propagated and attenuated waves, and propagation of two forward and two backward waves with periodic redistribution of energy between individual wave types, respectively.

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Surface spin waves

S/142/62/005/005/003/009
E140/E135

ASSOCIATION: Kafedra teoreticheskikh osnov radiotekhniki Khar'kovskogo aviatsionnogo instituta (Department of Theoretical Fundamentals of Radioengineering, Khar'kov Aviation Institute)

SUBMITTED: July 10, 1961

Card 2/2

ACCESSION NR: AR4028220 S/0274/64/000/002/A056/A057

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 2A362

AUTHORS: Shishkin, L. A.; Savchenko, M. A.

TITLE: On thermal radiation of magnetized ferrites

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. radiofiz. fak., v. 7, 53-59

TOPIC TAGS: ferrite, magnetized ferrite, thermal radiation, spontaneous magnetic moment, resonant radiation component, ferromagnetic resonance

TRANSLATION: The radiation of a magnetized ferrite, resulting from the interaction between the spontaneous magnetic moments and a constant magnetic field, is investigated. The ferrite fills an infinite half space and radiates into vacuum. The extraneous magnetic

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ACCESSION NR: AR4028229 S/0274/64/000/002/B097/B097

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 2B616

AUTHOR: Savchenko, M. A.; Shishkin, L. A.

TITLE: Influence of magnetization fluctuations on the thermal noise of a parametric ferrite amplifier

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. Radiofiz. fak., v. 7, 60-63

TOPIC TAGS: parametric ferrite amplifier, parametric amplifier, thermal noise, thermal magnetization fluctuation, magnetic moment fluctuation, fluctuation field

TRANSLATION: The theory of thermal noise of a parametric ferrite amplifier, due to thermal fluctuations of the magnetic moment, is considered. The most important component in the spectrum of the mo-

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ACCESSION NR: AR4028229

ment fluctuations corresponds to the ferromagnetic resonance frequency. It is shown that a fluctuation field of the same frequency as the signal is produced in the amplifier. The radiation energy of this field is determined. Yu. B.

DATE ACQ: 30Mar64 SUB CODE: GE, PH ENCL: 00

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S/0181/64/006/005/1435/1438

ACCESSION NR: AP4034925

AUTHORS: Bar'yakhtar, V. G.; Savchenko, M. A.; Shishkin, L. A.

TITLE: High frequency magnetic susceptibility of magnets with spiral ferromagnetic structure

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1435-1438

TOPIC TAGS: magnetic susceptibility, spiral ferromagnetic structure, ferromagnetic resonance, atomic spin, exchange interaction, susceptibility tensor, Bohr magneton, Heisenberg principle

ABSTRACT: The authors worked out the high-frequency susceptibility tensor for materials with spiral ferromagnetic structure. As shown by B. R. Cooper, R. I. Elliot, S. I. Nettel, and H. Suhl (Phys. Rev., 127, 57, 1962), such materials, unlike the usual ferromagnets, possess two resonant frequencies. One is comparatively small and lies in the frequency range of ferromagnetic resonance; the other, which is the result of exchange interactions of atomic spins, is essentially dependent on the pitch of the spiral and lies in the optical range. For simplicity the authors neglected the effects of attenuation and assumed that the spin waves

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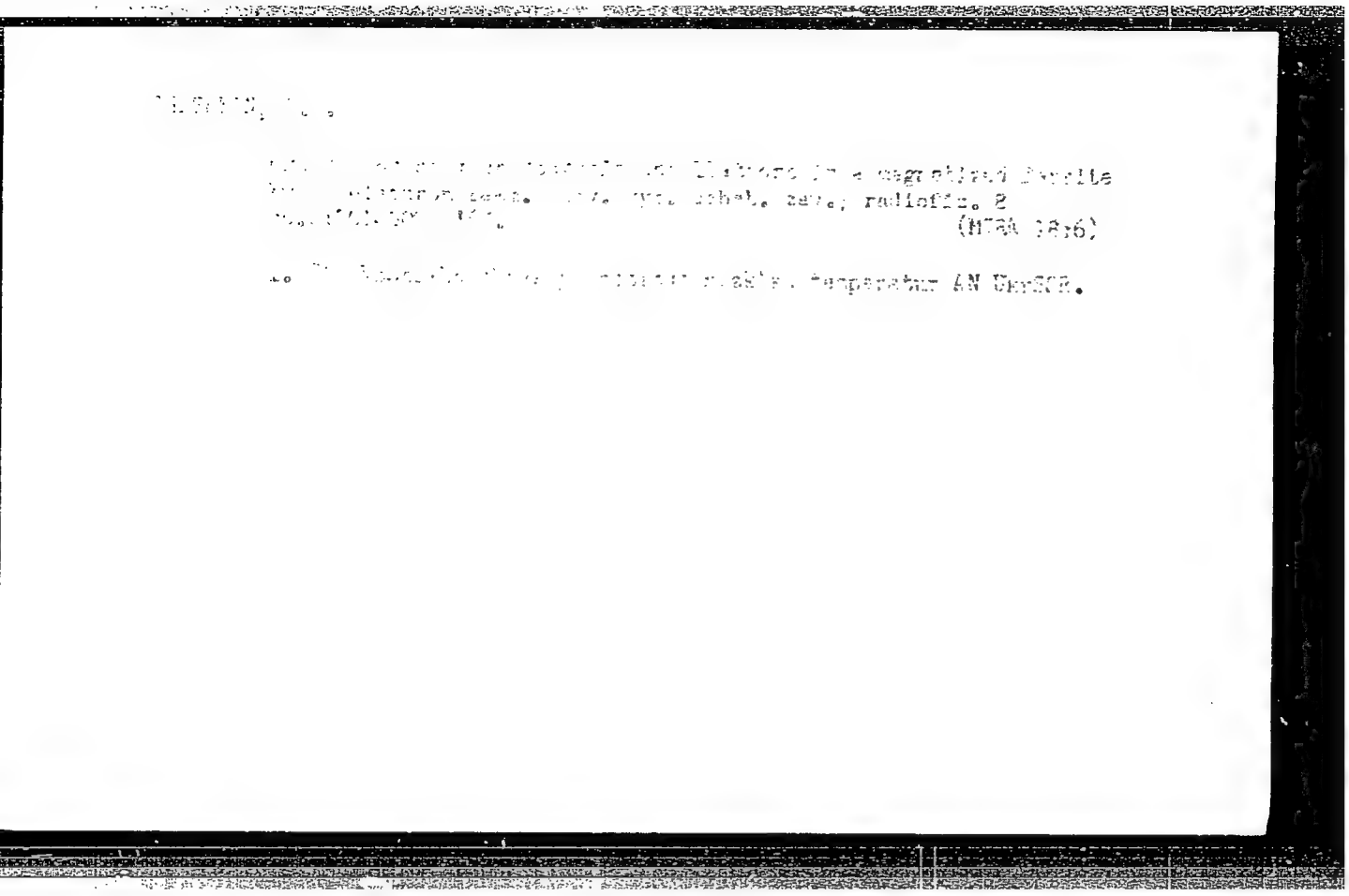

L 10920-65 EWT(1)/EPA(s)-2 Pt-10 IJP(c)/ASD(a)-5/RAEM(t) GG
ACCESSION NR: AP4039593 S/0126/64/017/005/0664/0671

AUTHORS: Bar'yakhtar, V. G.; Shishkin, L. A.

TITLE: Magnetization of ferromagnetics with two magnetic sublattices

B

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 5, 1964, 664-671

TOPIC TAGS: ferromagnetic structure, magnetization, temperature dependence, Curie temperature

ABSTRACT: The magnetization is considered of a ferromagnetic with two magnetic sublattices and arbitrary spin at the lattice points of each sublattice. Considering only spin exchange interactions and energy of the atoms in an external magnetic field H, the Hamiltonian of the ferromagnetic is given by

$$\mathcal{H} = -g_1\mu B\sum_f S_f^z - g_2\mu B\sum_g S_g^z - \frac{1}{2}\sum_{f_1 f_2} I_{11}(f_1 - f_2)S_{f_1}S_{f_2} -$$

$$-\frac{1}{2}\sum_{g_1 g_2} I_{22}(g_1 - g_2)S_{g_1}S_{g_2} + \sum_{fg} I_{12}(f-g)S_f S_g,$$

where S_f and S_g are the atomic spins in the first and second sublattice, I_{11}, I_{22}, $I_{12} > 0$ are the respective exchange integrals, μ is the Bohr magneton, g_1 and g_2 are the Landé factors, and the

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subscripts f and g refer respectively to the first and second sublattices. It is shown that the spectrum of elementary excitations is found from

$$E'_{1,2} = -\frac{1}{2}[\sigma_3(s_1 - s_2) + (s_1\alpha_1 - s_2\alpha_2)(\nu_k - 1)] \pm$$

$$\pm \left\{\frac{1}{4}[\sigma_3(s_1 - s_2) + (s_1\alpha_1 - s_2\alpha_2)(\nu_k - 1)]^2 + \sigma_3(1 - \nu_k) \times \right.$$

$$\left. \times (s_1^2\alpha_1 + s_2^2\alpha_2) + s_1 s_2 [\alpha_1\alpha_2(1 - \nu_k)^2 + \alpha_3^2(1 - \nu_k^2)]\right\}^{1/2},$$

where B = 0 for simplicity and

$$\alpha_1 = \sum_{f_1} I_{11}(f - f_1);\ \alpha_2 = \sum_{g_1} I_{22}(g - g_1);\ \alpha_3 = \sum_{f} I_{12}(g - f) = \sum_{g} I_{12}(g - f);\ s_1 = \langle S_f^z \rangle;\ s_2 = -\langle S_g^z \rangle.$$

In the approximation of nearest neighbors $\nu_k = \frac{1}{3}[\cos k_x a + \cos k_y a + \cos k_z a]$ for simple lattice vibrations. The expression for $E^g_{1,2}$ is obtained from that for $E^f_{1,2}$ by replacing the quantities s_1 and α_1 by s_2 and α_2 and conversely. The average values of the sublattice spins as a function of temperature $T = 1/\beta$ are given by

$$S_1 = \frac{1}{2};\ s_1 = \frac{1}{2}\frac{1}{1 + 2\Phi_1\left(\frac{1}{2}\right)};$$

$$S_1 = 1;\ s_1 = \frac{1 + 2\Phi_1(1)}{1 + 3\Phi_1(1) + 3\Phi_1^2(1)};$$

$$S_\lambda = \frac{3}{2};\quad s_\lambda = \frac{\frac{3}{2}\Phi_\lambda\left(\frac{3}{2}\right) + \left[\Phi_\lambda\left(\frac{3}{2}\right)\right]^2}{\left[1+\Phi_\lambda\left(\frac{3}{2}\right)\right]^2 - \left[\Phi_\lambda\left(\frac{3}{2}\right)\right]^2} \quad (\lambda = f, g),$$ where

$$\Phi_f = \frac{1}{N}\sum_k \frac{1}{E_1^f - E_2^f}\left[\frac{E_1^f + s_1\varepsilon_3 + s_2\varepsilon_3(1-\nu_k)}{e^{\beta E_1^f}-1} - \frac{E_2^f + s_1\varepsilon_3 + s_2\varepsilon_3(1-\nu_k)}{e^{\beta E_2^f}-1}\right]$$ and $$\Phi_g = \frac{1}{N}\sum_k \frac{1}{E_1^g - E_2^g}\left[\frac{E_1^g + s_2\varepsilon_3 + s_1\varepsilon_3(1-\nu_k)}{e^{\beta E_1^g}-1} - \frac{E_2^g + s_2\varepsilon_3 + s_1\varepsilon_3(1-\nu_k)}{e^{\beta E_2^g}-1}\right].$$

The two limiting cases of low temperatures and temperatures near the Curie temperature are discussed. At T = 0 similar expressions are obtained for the average values of the sublattice spins with $\Phi_\lambda(S_\lambda)$ replaced by Φ_0. If the interaction between sublattices is significantly greater than that within the sublattices, then

$$\Phi_0 \approx \frac{1}{2}F(t) - \frac{1}{2};\quad \varepsilon_0 \gg \varepsilon_1, \varepsilon_2;\quad F(t) = \left(\frac{2}{\pi}\right)^3 \int_0^{\frac{\pi}{2}} \int_0^{\frac{\pi}{2}} \int_0^{\frac{\pi}{2}} \frac{dx\,dy\,dz}{\sqrt{1 - \frac{t}{9}(\cos x + \cos y + \cos z)^2}}$$

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ACCESSION NR: AP4039593

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where $t = \frac{4s_1s_2}{(s_1+s_2)^2}$. Numerical values for F(t) are given in a table. By means of an example it is shown that even at T = 0 the average spins do not equal their maximum values because of zero-point vibrations. If $S_f = S_g$, then the magnetization is directly proportional to T^4. For the other limiting case a number of expressions for the Curie temperature T_C and for the magnetization at temperatures near T_C are given, which are valid under certain conditions. The authors express thanks to A. I. Akhiyezer for interest in the work and to V. A. Yanmitskiy, A. F. Makarov, M. N. Kuz'min, and V. V. Fedorova of the Laboratory of Physical Cybernetics, FTI AN UkrSSR for tabulating the function F(t). Orig. art. has: 79 equations and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR (Physico-technical Institute, AN UkrSSR); Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR (Institute of Low-Temperature Physics and Technology, AN UkrSSR)

SUBMITTED: 24 Apr63 ENCL: 00

SUB CODE: EM, SS NO REF SOV: 004 OTHER: 002

Card 4/4

L 4969-66 EWT(1)/EPA(w)-2/EWA(m)-2 IJP(c) AT
ACC NR: AP5026709 SOURCE CODE: UR/0141/65/008/005/0942/0947

AUTHOR: Shishkin, L. A.; Bar'yakhtar, V. G.

ORG: Physicotechnical Institute of Low Temperatures, AN UkrSSR (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR)

TITLE: Contribution to the theory of coherent amplification of magnetostatic oscillations by an electron beam

SOURCE: IVUZ. Radiofizika, v. 8, no. 5, 1965, 942-947

TOPIC TAGS: ferrite, magnetic resonance, electron beam, coherent scattering

ABSTRACT: This is a continuation of earlier work by one of the authors (Bar'yakhtar, with A. I. Akhiyezer and S. V. Peletminskiy, Phys. Letters v. 4, 129, 1963 and ZhETF v. 45, 337, 1963; with Z. Z. Makhmudov, ZhETF v. 47, 593, 1964), who showed that the spin waves can be coherently amplified in infinite ferro- and antiferromagnets by a beam of charged particles. The present article deals with the interaction between an electron beam and magnetization oscillations in a finite magnet, where the shape of the body affects the spin-wave spectrum. Only the principal natural oscillation modes (Walker Modes, Phys. Rev. V. 105, 390, 1957), which are extensively used in microwave electronics, are considered, and exchange

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ACC NR: AP5026709

interaction is neglected. The authors determine the increments of the fundamental modes of the magnetostatic oscillations in a ferrite plate and show that the increment reaches a maximum when one of the resonant conditions is satisfied: $\omega = \beta v_0 - \omega_H$ (ω_H-- frequency of the magnetostatic oscillations of the plate, v--beam velocity, β--wave vector). The increment is proportional to the square root of the charge density in the beam. The fields decrease outside the plate exponentially, since the beam particles participating in the coherent amplification of the magnetostatic oscillations are those located at a distance of the order of $1/\beta$ from the surface of the plate. For frequencies on the order of 10^{-10} sec^{-1}, the increment has an approximate value 10^{-3}. Orig. art. has: 19 formulas. [02]

SUB CODE:NP,SS, EM/ SUBM DATE: 19Dec64/ ORIG REF: 002/ OTH REF: 002
ATD PRESS: 4138

Card 2/2

BEZUGLYY, P.A.; YEREMENKO, V.V.; KUKUSHKIN, L.S.; KULIK, I.O.; MANZHELIY, V.G.; PERESADA, V.I.; PESCHANSKIY, V.G.; POPOV, V.A.; SHISHKIN, L.A.

Conference on the physics of the condensed state. Usp. fiz. nauk 88 no.2:387-393 F '66. (MIRA 19:2)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR.

SHISHKIN, L.S.

KULIKOVSKIY, M.G.; SHISHKIN, L.S.

Radio interference created by high-frequency electrical medical apparatus and some methods for decreasing it. Med.prom. 11 no.1: 12-19 Ja '57. (MLRA 10:2)

1. Moskovskiy gosudarstvennyy soyuznyy zavod elektromeditsinskoy apparatury "EMA"
(ELECTRIC APPARATUS AND APPLIANCES)
(RADIO—INTERFERENCE)

KULIKOVSKIY, M.G.; SHISHKIN, L.S.

Radio interference caused by high-frequency electric medical apparatus and some measures armed at controlling it. Med. prom. 11 no.2:29-37 F '57 (MLRA 10:4)
(RADIO--INTERFERENCE) (ELECTRIC APPARATUS AND APPLIANCES)
(MEDICAL INSTRUMENTS AND APPARATUS)

L 5318-66 EWT(1)/EWA(h) JM
ACC. NR: AP5022050 SOURCE CODE: UR/0286/65/000/014/0127/0127

AUTHOR: Shishkin, L. S.

ORG: none

TITLE: Device for suppressing radio interference. Class 21, No. 149478

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 127

TOPIC TAGS: radio noise, interference reduction

ABSTRACT: This Author Certificate presents a device for suppressing radio interference caused by high frequency oscillators containing resonance circuits tuned to the interference frequency. To increase the effectiveness of interference suppression mainly at the fundamental frequency with asymmetric loads, reactive elements, connected between the oscillator case and the main leads, are used. The sign of the susceptance of the reactive elements is opposite to the sign of the internal susceptance of the oscillator for the in-phase component of the output current.

SUB CODE: EC/ SUBM DATE: 11Jan58/ ORIG REF: 000/ OTH REF: 000

Card 1/1

SHISHKIN, M. Engr. Rear-Admiral

"Present Day Missiles," Sovetskiy Flot, 3 March 1956

Verbatim translation D 470178

SHISHKIN, M.

Hydrostatic level. Mashinostroitel' no.12:24 D '59.
(MIRA 13:3)

(Level(Tools))

SHISHKIN, M.A.

Inflectosaurus amplus, a new Triassic trematosaurian.
Paleont.zhur. no.2:130-148 '60. (MIRA 13:7)

1. Paleontologicheskiy institut Akademii nauk SSSR.
(Baskunchak region--Amphibia, Fossil)

SHISHKIN, M.A.

Recent data on Tupilakosaurus. Dokl. AN SSSR 136 no.4:938-941 F '61. (MIRA 14:1)

1. Paleontologicheskiy institut AN SSSR. Predstavleno akademikom Y.A. Orlovym.
(Vetluga Valley—Stegocephali)

SHISHKIN, M.A.

Effect of uneven illumination of aerial photographs on the results of work with topographic stereometers. Geod. i kart. no.7:28-30 Jl '60. (MIRA 13:9)

(Aerial photogrammetry)

RYABININ, A.N. [deceased]; SHISHKIN, M.A.

Upper Permian labyrinthodont Jugosuchus. Paleont.zhur. no.1: 140-145 '62. (MIRA 15:3)

1. Paleontologicheskiy institut AN SSSR.
(Amphibia, Fossil)

PAKHTUSOVA, N.A.; SHISHKIN, M.A.

Recent materials for establishing the boundary between the Permian and the Triassic in the Basin of the Northern Dvina River. Dokl. AN SSSR 143 no.1:194-197 Mr '62.
(MIRA 15:2)

1. Severo-Zapadnoye geologicheskoye upravleniye i Paleontologicheskiy institut AN SSSR. Predstavleno akademikom Yu.A.Orlovym.
(Northern Dvina Valley--Geology, Stratigraphic)

GAYDAMAKA, M.P.; SHISHKIN, M.A.

Reinforced-concrete beds. Mashinostroitel' no.4:15 Ap '63.
(MIRA 16:5)
(Kiselevsk--Machinery industry)

OCHEV, V.G.; SHISHKIN, M.A.; GARYAINOV, V.A.; TVERDOKHLEBOV, V.P.

New data on the stratigraphic division of the Triassic according to vertebrates in the Ural Mountain portion of Orenburg Province. Dokl. AN SSSR 158 no.2:363-365 S '64. (MIRA 17:10)

1. Nauchno-issledovatel'skiy institut geologii pri Saratovskom gosudarstvennom universitete im. N.G.Chernyshevskogo i Paleontologicheskiy institut AN SSSR. Predstavleno akademikom Yu.A.Orlovym.

SHISHKIN, M.T.

Gauge for checking the perpendicularity of the spindle face to the thimble-screw axis in micrometer calipers. Izm.tekh. no.3:80-81 My-Je '56. (Micrometer) (MLRA 9:9)

ACC NR: AP7005341 SOURCE CODE: UR/0181/67/009/001/0167/0170

AUTHOR: Finkel', V. M.; Sharafutdinov, R. F.; Shishkin, M. V.

ORG: Siberian Metallurgical Institute im. S. Ordzhonikidze, Novokuznetsk (Sibirskiy metallurgicheskiy institut)

TITLE: Probability of revealing dislocations by a condensation method

SOURCE: Fizika tverdogo tela, v. 9, no. 1, 1967, 167-170

TOPIC TAGS: crystal dislocation phenomenon, electric measurement, vapor condensation, condensation nucleus, crystal surface, SODIUM CHLORIDE

ABSTRACT: The authors advance a hypothesis that dislocations can be observed on the surface of a crystal by means of the electric charge of the dislocations (the condensation method). The method is based on the preferred nucleation of microscopic droplets in saturated liquid vapor on the electric charges. Thest of this method were made on NaCl crystals in an atmosphere of concentrated hydrochloric acide, and affirmative results were obtained. Dislocations could not be revealed in the same atmosphere on LiF crystals, but the morphology of the surface of these crystals was fixed. In the case of NaCl, various tests aimed at checking on the reproducibility of the method were also made and confirmed its feasibility. Inasmuch as the dimensions of the drops produced on the surface of the crystal are much smaller than etch pits, the method has somewhat better resolution than etching, especially at high dislocation densities. This selective arrangement of the drops makes it possible to

SHISHKIN, N.

Quality of the PMZ-18 automatic pumps. Pozh.delo 3 no.5:18 My '57.
(MLRA 10:7)

(Pumping machinery)

SHISHKIN, N.

USSR/Meteorological Research Apr 1947
Lightning

"The Coagulation of Water Drops and the Origin of Lightning Discharges, I," J. Frenkel, N. Shishkin, 10 pp

"Izv Ak Nauk Geograf i Geofiz" Vol X, No 4

Study of the normal electric fields in clouds, du to the equilibrium charge of water drops, and the growth of abnormally high fields in thunder-clouds due to the rapid growth of small drops into large ones with a resulting increase of the electrical charge.

PA 1316

USSR/Meteorological Research Apr 1946
Lightning

"The Role of Coagulation of Water Drops and the Origin of Lightning Discharges, II," N. Shishkin, 4 pp

"Izv Ak Nauk Geograf i Geofiz" Vol X, No 4

Development of the theory of the preceding paper for the case of cumulus rain-clouds with an ascending air stream, the vertical component of which decreases with altitude while the concentration of the cloud particles remains constant.

1317

SHISHKIN, ?N. A. Cand. Vet. Corps ; KOLOKOLOV, ?N. A., Maj. Vet. Corps
?V.

"Treatment of Erethistic Ulcers and Nonhealing Wounds (III)"

in Bolezni Loshadey (Equine Diseases), Collection of Works, Ogiz-Sel'khozgiz, 1947, p 105 in Chap. IV - Surgical Diseases

Compiled by A. Yu. Branzburg and A. Ya. Shapiro, under editorship of A. M. Laktionova, State Press for Agric. Literature.

In majority of cases articles previously published in the journal Veterinariya or in one of the manuals issued by the Vet. Admin. of the Armed Forces USSR

-W-9922 , 1 May 1950 p 2

m

MARKOV, A.; SOKOLOV, I.; ALEKHOV, K.; YEREMENKO, N.; SHISHKIN, N.
(Leningrad)

Our volunteer firemen. Pozh.delo 6 no.10:4-5 O '60.
(MIRA 13:10)

1. Nachal'nik Otdela pozharnoy okhrany, g.Bryansk (for Markov).
2. Inspektor Otdela pozharnoy okhrany, Novgorod (for Sokolov).
3. Nachal'nik Otryada pozharnoy okhrany, poselok Znamensk, Kaliningradskaya oblast' (for Alekhov).
(Fire extinction)

SHISHKIN, N.A., inzhener,

Making multiribbed slabs by the method of quick removal from forms. Biul.stroi.tekh. 13 no.2:13-14 F '56. (MLRA 9:5)
(Concrete slabs)

TRUSOV, L.P., inzhener (Moskva); SHISHKIN, N.A., inzhener (Moskva)

Graphs for determining the thickness of walls of underground steel pipelines. Stroi.pred.neft.prom. 2 no.5:9-12 My '57. (MIRA 10:7)

(Pipe, Steel)

SHISHKIN, M.A., inzh.

Making large-panel slabs by the method of the immediate removing of forms. Bet. i zhel.-bet. no.6:236 Je '58. (MIRA 11:6)
(Concrete construction--Formwork)

SHISHKIN, N.A., inzh.

Immediate removal of forms in making precast reinforced concrete products. Biul. stroi. tekh. 15 no.9:15-16 S '58. (MIRA 11:10)
(Concrete construction--Formwork)

SHISHIKIN, N.F.; ; KUKLIN, P.V., red.

[Sugar beets for feed] Sakharnaia svekla na korm; sbornik statei. Volgograd, Volgogradskoe knizhnoe izd-vo, 1963. 52 p. (MIRA 18:3)

1. Instruktor sel'skogo oblastnogo komiteta Kommunisticheskoy partii Sovetskogo Soyuza Volgogradskoy oblasti (for Shishikin).

SHISHKIN, N. F. PA 65T39

USSR/Electricity Mar 1948
Generators
Electrical Equipment

"Reconstruction of a Rotor and Repair of a Stator of a Generator of the AEG Firm Under Factory Conditions," N. F. Shishkin, Engr, 2 pp

"Prom Energet" No 3

Describes details of subject operation. Gives reasons for the breakdown, the effect on the generator, and brief description of repairs.

[redacted] 65T39

GURIN, Nikolay Yefimovich; MIKHEYEV, Yuriy Aleksandrovich; SHIRYAYEV, Boris Mikhaylovich; SHISHKIN, Nikolay Fedorovich; ZAPREYEVA, K.A., redaktor; KOROVENKOVA, Z.L., tekhnicheskiy redaktor.

[Electrical engineering in mining] Gornaia elektrotekhnika. Moskva, Ugletekhizdat, 1955. 506 p. (MLRA 9:5)
(Electricity in mining)

SHISHKIN, N.F.; kand.tekhn.nauk; SMORODINSKIY, Ya.M., kand.tekhn.nauk; MIKHEYEV, Yu.A., inzh.; SHALAGINOVA, T.S., inzh.; GIMOYAN, G.G., kand.tekhn.nauk.

Filter-type relay protection for electric motors. Elektrichestvo no.12:60-64 D '57. (MIRA 10:12)

1.Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut (for Shishkin) 2.Donetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Gimoyan).

(Electric motors)

8(3) SOV/112-59-5-8894

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 67 (USSR)

AUTHOR: Shishkin, N. F.

TITLE: Objectives in Creating a Reliable and Safe Power Supply to Coal Mines

PERIODICAL: V sb.: Sovershenstvovaniye gibkikh shlangovykh kabeley. M., 1958, pp 43-50

ABSTRACT: A mechanically damaged cable in a mine must be quickly cut off, in less than 2 millisec, to prevent fault dislocation. The energy stored in the inductance of motors, etc., should be dissipated. The most rational method is to shortcircuit the phases and subsequently have them cut off by a relay protective system. Construction of a short-circuiter with a permanent magnet and disk springs is described. On energizing the coil of the magnet, that produces a demagnetizing field, the contacts close in 1.6 millisec. The contact spacing is 2 mm. To limit the short-circuit current, a rupturing device using the explosion energy can be introduced between the transformer and the short-

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Objectives in Creating a Reliable and Safe Power Supply to Coal Mines

circuiter. Initially, a current-limiting arc is formed in the circuit-breaker; then, in one millisec, the line is short-circuited. To register the moment of the cable mechanical damage in order to energize the coil, cable constructions have been developed that have individual shields around the cable principal cores (single-shield cable) or one or two shields made of semiconducting rubber. A drawing is presented of a shielded cable made by the Crompton Company with a metal shield that ensures quick off-switching but has an insufficient flexibility. The single-shield cables are most promising.

V.V.M.

AUTHOR: Shishkin, N.F., Candidate of Technical Sciences

SOV/105-58-10-13/28

TITLE: Protection of Alternating-Current Machines From Internal Shorts in the Stator Winding (Zashchita mashin peremennogo toka ot vnutrennikh zamykaniy v obmotke statora)

PERIODICAL: Elektrichestvo, 1958, Nr 10, pp 57-59 (USSR)

ABSTRACT: This is an investigation of a simple and reliable protection against shorts in the stator winding, which can be used in place of a differential protection. This protection operates on the principle of the utilization of the magnetic coupling between the stator end connectors and the separately mounted protection coil. In order to demonstrate the working of this protection three modes of operation of a synchronous generator with fractional (drobnyy) stator winding partition are investigated:no-load, load and short circuit in the stator winding. The test runs showed that a protection adjusted in the way described operates selectively to all phase-to-ground and phase-to-phase faults. An exception is only the case of an equal number of windings being short-circuited in each phase of the stator winding. The protection advanced in this paper does not eliminate the necessity to establish a phase-to--ground protection in supply systems with contact-to-ground cur-

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rent. It also constitutes no safeguard against shorts in the bushings of the generator. - I.A. Syromyatnikov and N.I. Sokolov assisted in the work. S.A. Ul'yanov and B.I. Kirkin made valuable suggestions. There are 3 figures.

SUBMITTED: March 20, 1958

SHISHKIN, Nikolay Fedorovich, kand.tekhn.nauk; OLEKSEVICH, Valeriy Pavlovich; DANILIN, Petr Yakovlevich; MIKHEYEV, Yuriy Aleksandrovich; SYCHEV, Leonid Ivanovich. Prinimali uchastiye: SHALAGINOVA, T.S., inzh.; SMORODINSKIY, Ya.M., kand.tekhn.nauk; KALINICHENKO, M.F., inzh.; CHASHKIN, Ye.V., inzh.; ASTAF'YEV, V.D., inzh.; PROKOF'YEV, V.I., vedushchiy konstruktor; ROGOV, V.A., starshiy master; MOSKALENKO, V.M., laborant; GERASIMOV, N.F., laborant; POPOV, N.A., kand.fiziko-matem. nauk; KALINICHENKO, M.F., inzh.. LYUBIMOV, N.G., otv.red.; ALADOVA, Ye.I., tekhn.red.; PROZOROVSKAYA, V.L., tekhn.red..

[Protection of the electric equipment and cable networks in mines] Zashchita shakhtnykh elektroustanovok i kabel'nykh setei. Pod red. N.F.Shishkina. Moskva, Ugletekhizdat, 1959. 242 p. (MIRA 12:3)
(Electricity in mining) (Electric cables)

SHISHKIN, Nikolay Fedorovich; DANILIN, Petr Yakovlevich; LYUBIMOV, N.G., otv.red.; GALANOVA, V.V., tekhn.red.

[Superfast switching apparatus] Sverkhbystrodeistvuiushchii kommutatsionnyi apparat. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 34 p. (MIRA 13:7)
(Electric switchgear)

SHISHKIN, Nikolay Fedorovich, kand.tekhn.nauk; MINDELI, Givi Valerianovich, kand.tekhn.nauk; KORABLEV, A.A., red.; ABRAMISHVILI, T.A., red. izd-va; MEGRELADZE, A.G., tekhn.red.

[Safety measures for electricity in mines and premises subject to explosion hazards] Elektrobezopasnost' v shakhtakh i vzryvo-opasnykh pomeshcheniiakh. Tbilisi, Gos.izd-vo uchebno-pedagog. lit-ry "TSodna," 1960. 494 p. (MIRA 14:3)
(Electricity in mining) (Industrial safety)

SHISHKIN, N.F., kand.tekhn.nauk; MINDELI, G.V., kand.tekhn.nauk

Quickly responding protection system against leakage currents and compensation of capacitative currents in low-voltage networks. Ugol' Ukr. 4 no.10:35-39 O '60. (MIRA 13:10)

1. Institut gornogo dela AN SSSR.
(Electricity in mining)
(Coal mines and mining--Safety measures)

SHISHKIN, N.F., kand.tekhn.nauk (Moskva); DANILIN, P.Ya., kand.tekhn.nauk (Moskva)

Combined method of switching for power networks. Elektrichestvo no.7:47-50 Jl '60. (MIRA 13:8)
(Electric switchgear)

SHISHKIN, Nikolay Fedorovich, kand. tekhn. nauk; LYUBIMOV, N.G., otv. red.; GALANOVA, V.V., tekhn. red.

[High-speed system for protecting mine networks from short-circuits to ground]Bystrodeistvuiushchaia zashchita shakhtnykh setei ot zamykaniia na zemliu. Moskva, Gosgortekhizdat, 1960. 53 p. (MIRA 15:12)
(Electricity in mining) (Mine safety)

SHISHKIN, N.F., doktor tekhn.nauk (Moskva); MINDELI, G.V., kand.tekhn. nauk (Moskva)

Problems concerning protective grounding in low-voltage networks. Elektrichestvo no.11:78-82 N '62. (MIRA 15:11)
(Electric networks--Safety measures) (Electric currents--Grounding)

SHISHKIN, N.F., doktor tekhn. nauk (Moskva); MINDELI, G.V., kand. tekhn. nauk (Moskva)

Effect of inductance relative to earth on safety in electrical networks. Elektrichestvo no.12:42-45 D '63. (MIRA 17:1)

SHISHKIN, N.F., doktor tekhn. nauk; GORYUNOV, Yu.I.; KAYMAKOV, A.A.; BEZDENEZHNYKH, A.G.; NOVOSEL'TSEV, R.K.; PECHENIN, V.S., kand. tekhn. nauk

Area using penumatic energy in coal mines: Using electric power in coal mines. Ugol' 40 no.4:14-18 Ap '65.
(MIRA 18:5)

1. Institut gornogo dela im. A.A. Skochinskogo (for Shishkin). 2. Glavnyy energetik kombinata Kuzbassugol' (for Goryunov). 3. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti (for Kaymakov, Bezdenezhnykh, Novosel'tsev). 4. Kemerovskiy gornyy institut (for Pechenin).

SHISHKIN, N.I.

Salt resources in the north of the European part of the U.S.S.R.
Izv. AN SSSR. Ser. geog. no.1:102-107 Ja-F '58. (MIRA 11:2)

1.Komi filial AN SSSR.
(Russia, Northern--Salt mines and mining)

IL'IN, Konstantin Pavlovich, kand. tekhn. nauk; SHISHKIN, Nifont Ivanovich, inzh.; GAUZNER, S.I., inzh., retsenzent; SHISHLYKOV, Ye.S., inzh., red.; KHITROVA, N.A., tekhn. red.

[Manual on freight weighing]Spravochnik po vesovomu khozyaystvu. Moskva, Transzheldorizdat, 1962. 319 p. (MIRA 15:11)

(Weighing machines) (Railroads—Freight)